



## **Worksheet 6 Transaction processing**

### **Task 1**

1. When you place an order over the phone for one or more items, such as a book or clothing, to be delivered to your home, the sales person at the other end of the phone will type details of your order into a database.
  - (a) Using an example of an item that you are ordering, list the data that will need to be entered.
  
  
  
  
  
  
  
  
  
  
  - (b) List ways in which the data entry can be made as quick and easy as possible
  
2. What methods of data capture would be suitable for entering data from a market research survey conducted in the street?
  
  
  
  
  
  
  
  
  
  
3. Processing a transaction often involves several different operations. List the operations that a computer system belonging to a cinema will need to complete to sell a cinema ticket online.



### Task 2

4. If you use Cloud storage such as Dropbox, you can specify that certain files can be shared with other named users. You could use it, for example, to work with a friend on a joint project saved in ProjectX.docx..

Suppose you open ProjectX.docx, and start editing it. While you are doing this, your friend Jo also opens it, makes a few corrections to the joint project and saves it. When you save your version, what happens? Are some of the corrections lost?

5. **ACID** stands for Atomicity, Consistency, Durability, Isolation.

(i) Explain the purpose of this set of properties.

(ii) How does ACID ensure that for example a cinema seat is recorded as sold and payment is not taken, owing to a power failure in the middle of the transaction?

(iii) What is meant by referential integrity? Give an example.

6. Explain how record locking can cause deadlock.



7. Name and briefly describe two serialisation techniques which ensure that transactions do not overlap in time and ensure that updates are not lost.